

Method of Test For
MECHANICAL ANALYSIS OF EXTRACTED AGGREGATE
DOTD DESIGNATION: TR 309-14

Scope

1. A. This method of test is intended to determine the gradation of aggregate extracted from asphaltic mixtures.
2. Reference Documents
 - A. DOTD TR 113 – Sieve Analysis of Fine and Coarse Aggregates
 - B. DOTD TR 307 – Bitumen Content of Paving Mixtures
 - C. DOTD TR 323 – Determining the Asphalt Content of Asphaltic Mixture by the Ignition Method
 - D. AASHTO T30 – Mechanical Analysis of Extracted Aggregate
 - E. DOTD TR 3xx – Asphalt Volumetric Calculations

Apparatus

1. AASHTO T30, Section 4-APPARATUS with the following modifications:
 - A. Hot plate – the use of electric or open flame hot plate drying is allowed where ovens are not available or practical. Open flame hot plates shall be equipped with a suitable shield to evenly disperse the heat and to avoid direct contact of the flame with the drying pan.
2. Forms – Aggregate Test Report, Asphaltic Concrete Plant Report, or other appropriate forms

Health Precautions

Proper precautions are to be taken whenever hot materials or equipment must be handled. Use container holder or thermal gloves while handling hot containers. Wear eye protection while stirring and weighing heated materials due to possible shattering of particles. Dry contaminated materials under a vent to prevent exposure to fumes.

Sample

The test sample shall consist of all the dry aggregate from the extracted sample of asphaltic mixture in accordance with DOTD TR 307 or DOTD TR 323. The initial dry total weight (w) of the test sample from DOTD TR 307 or DOTD TR 323 is shown on the Asphaltic Concrete Plant Report.

Procedure

1. Use AASHTO T30, Section 6-PROCEDURE with the following modifications
 - A. The use of a mechanical shaker is required.

Report

1. Report the percent passing each sieve (except No. 200) to the nearest whole percent.
2. Report the percent passing the No. 200 sieve to the nearest 0.1%.
3. Report the results of sieve analysis on the Asphaltic Concrete Plant Report or other appropriate form.

Normal Test Reporting Time

Normal test reporting time is 8 hours.